

Notes on the Taro Leafhopper (*Megamelus proserpina* Kirk.)
(*Delphacidae*).

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This destructive insect, which was believed to be eradicated at Waianae in 1930, has reappeared and is now doing considerable damage to the taro planted on the lands of the John Ii Estate and the Bishop Estate makai of King St. and ewa of Kalakaua Ave., Honolulu. It is apparently confined to a very small acreage and eradication will again be attempted. Considerable mystery surrounds its occurrence here and a satisfactory explanation is still awaited.

In view of the determination to attempt its eradication in both instances of its appearance here, there has been no opportunity to make life-history studies of the insect in these islands, but such an opportunity was embraced on the occasion of a visit to the Philippine Islands in 1931, and the notes then made are now offered for publication.

The eggs are small (less than 1 mm. long), spindle-shaped with pointed ends, pearly white. They are deposited principally in the stems in cavities hollowed out in the soft cellular tissue. Most cavities exposed contained two eggs. The eggs hatch in 8 to 9 days (at Laguna, P. I., in September). The nymph thus hatched is very tiny but develops rapidly and in 13 days becomes an adult insect, several millimeters long. Only four moultings were observed during this process of growth, occurring at 3-4 day intervals. All the adults collected in September at Laguna were short-winged forms, the same as those at Waianae. Long-winged forms were shown me by Prof. Uichanco of the Agricultural College. It was observed at Laguna that the egg-tubes in the female were fully developed three days after the adult state was reached. The proportion of the sexes was about

equal. Copulation is believed to take place at night. The leaf-hopper was not found on any other plant than the cultivated taro. The species is heavily parasitized in the Philippines. The parasites observed there were *Paranagrus perforator*, *Ootetrastichus* sp. (a different species from either *beatus* or *formosanus*) and a dryinid. When the insect was first seen at Waianae by Swezey and myself it was being attacked by a dryinid and *Cyrtorhinus*.